

REMARKS

I. Status of the Claims

Claims 33-46 are pending in this application. Claim 33 is the only independent claim. Claims 1-32 and 47-58 have been canceled pursuant to a restriction requirement in the parent application No. 09/479,549, and pursuant to an election-of-species requirement mailed December 6, 2004, and further pursuant to the telephonic restriction requirement referenced at pages 2-3 of the April 6, 2005 Office Action.

Claims 33, 34 and 37 have been amended to define still more clearly what Applicants regard as their invention. No new matter has been added.

II. Restriction/Election

Applicants confirm the telephonic election of claims 33-46, without prejudice. Applicants reserve the right to prosecute claims to the carrier bar invention in a divisional application.

III. Allowable Subject Matter

Applicants note with appreciation the Examiner's indication that Claims 36, 37 and 39-42 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

IV. Rejections Under 35 U.S.C. § 103

Claims 33-35, 44 and 45 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,267,997 (Ream, et al.) in view of U.S. Patent No. 4,619,196 (Matsuoka, et al.). Claim 38 has been rejected under 35 U.S.C. § 103(a) over Ream and Matsuoka in view of U.S. Patent No. 5,423,252 (Yamamoto). Claim 43 has

been rejected under 35 U.S.C. § 103(a) over Ream and Matsuoka in view of U.S. Patent No. 2,613,594 (Emerson). Claim 46 has been rejected under 35 U.S.C. § 103(a) over Ream and Matsuoka in view of U.S. Patent No. 4,905,589 (Ackley). Applicants respectfully traverse.

As amended, the present claims are more clearly directed to an apparatus for conveying and holding edible pieces having a non-planar printing surface between two printing stations. Likewise, the recesses are claimed as having a non-planar surface corresponding to the pieces, which helps to prevent lateral, longitudinal and rotational movement of the pieces between printing stations. Support for the amendment is found in the specification as filed, at least at page 25, lines 10-17 and lines 26-28.

Prior to the invention hereof by the applicants, printing apparatus were not available that could print composite (multicolor) images formed of component images applied on shaped confectionery at different printing stations. The apparatus has opened new frontiers in terms of decorating confectionery, such as M&M'S® Milk Chocolate and Peanut Chocolate Candies, with complex and appealing images.

Ream discloses printing registered images on edible substrates, but does not disclose an apparatus for transporting individual shaped pieces as claimed. The edible substrates in Ream are large, flat sheets **22** of chewing gum (i.e., most preferably 10 inches wide and 4-1/2 inches long, length being measured in the traveling direction of the sheet, see e.g. col. 5, lines 56-65). Clearly, printing on a flat sheet does not raise the same issues as printing on a shaped piece, as a sheet would not be subject to lateral, longitudinal or rotational movement.

Further, according to Ream, the sheets are positioned in recesses 14, which are larger than the sheets, and about the same thickness as the sheets (see page 14, line 24), preferably a little deeper (i.e., preferably 1/16 inch, compared to the 0.06 inch “ideal” thickness of the sheet, see col. 10, lines 34-37 and col. 5, line 48). These recesses do not securely hold pieces in registration. In fact, according to the passage cited in the Office Action, at col. 8, line 47-50, the sheets of gum are actually moved by guide rail 69 while the sheets are in the recess, which shows that the recesses do not correspond to the shape of the pieces, as set forth in the claims.

An optional vacuum system, disclosed in Ream at col. 10, lines 61-63, is not disclosed as holding pieces in registration as suggested in the Office Action. The reference merely suggests that a vacuum system, which is used primarily to remove dust, “would also help hold the gum sheets onto the conveyor bed.” There is no suggestion that the vacuum is applied between printing stations, in a manner consistent with the last limitation of claim 33, to hold the edible piece in registration between printing steps.

The Office Action alleges that the apparatus in Ream would be capable of printing on edible pieces having non-planar surfaces, and/or that one of ordinary skill in the art would have found that obvious (Office Action page 5). To the contrary, the Office Action itself cites art that makes it clear that specialized apparatus are required to convey individual shaped pieces (Yamamoto, Matsuoka). Applicants submit that modification of Ream to the specialized apparatus required to convey shaped pieces, and print on such pieces at plural print stations to obtain highly-defined registered images is not disclosed in, or obvious in view of, the cited art.

Matsuoka, which does not disclose two printing stations, does not overcome the deficiencies of Ream. The Office Action relies on Matsuoka to teach a vacuum system for holding individual pieces in registration. However, Matsuoka merely teaches a vacuum drum, and the pieces are not held in place between printing steps. Further, it is clear from the Figures in Matsuoka that the recesses are large relative to the pieces, and that Matsuoka contemplates substantial movement of the pieces in the recesses. Thus, the reference does not teach that the pieces are held in registration as claimed.

The motivation to combine Matsuoka with Ream is also lacking. The references address two different types of substrates, sheets of chewing gum and tablets, and the methods disclosed are inseparable from the means used to convey the pieces. Thus, it would not have been obvious to utilize a conveying means from one reference and use it in an apparatus designed for a different purpose.

Yamamoto discloses a chain or belt conveyor for conveying tablets which is also provided with vacuum (Yamamoto, col. 6, lines 25-26). Here at least “the solid articles 200 are firmly held in the pockets 120a during printing.” However, Yamamoto has essentially the same problem as Matsuoka as a reference, in that there is no means disclosed to hold the pieces in registration between two print stations. Thus, even if combined with Ream and Matsuoka, all of the elements are not found in the combination of references.

In summary, Ream is the only reference applied against the claims that discloses an apparatus having two printing stations for printing on edibles. However, the substrates in Ream are large flat sheets of chewing gum, and the apparatus for conveying

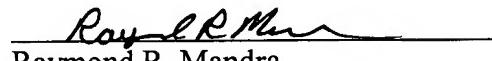
them is designed for that purpose. Starting from Ream, it would not have been obvious to use an apparatus in which shaped pieces having non planar printing surfaces are conveyed in individual shaped recesses between two printing stations, as presently claimed. It is no accident that M&M'S® Milk Chocolate and Peanut Chocolate Candies and like confectionery have not heretofore been decorated with composite images (*i.e.*, images formed from component images formed at different printing stations).

Turning to rejections applied against the dependent claims, Emerson is relied upon to teach a resilient portion on a surface of the recesses transporting the shaped edible (Office Action, page 6). Ackley '489 is relied upon as teaching the use of an ink jet printer (Office Action, page 6). Even if the teaching of these references could be combined with Ream and Matsuoka as set forth in the Office Action, the combined references fail to teach an apparatus in which individual shaped pieces are conveyed in registration between printing stations, and reconsideration of these rejections is likewise respectfully requested. Applicants note that Emerson is not directed to printing on edible substrates, which suggests that there is a lack of motivation to combine this reference with the others.

The other claims in this application not specifically addressed above are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

Applicants' attorney of record may be reached in our New York office by telephone at (212) 218-2100. All correspondence should be directed to our below-listed address.

Respectfully submitted,


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